Canada

BC

Economic & Regional Development Agreement

CANADA-BRITISH COLUMBIA FOREST RESOURCE DEVELOPMENT AGREEMENT

ANNUAL REPORT 1986/87

88-04633/

Canada

BC

CANADA-BRITISH COLUMBIA
FOREST RESOURCE DEVELOPMENT AGREEMENT
1985 - 1990
1986/1987 ANNUAL REPORT

The 1986/1987 Annual Report is presented in accordance with Section 3.6 of the Canada-British Columbia Forest Resource Development Agreement.

Approved by:

D.R. Macdonald
Director General
Pacific and Yukon Region
Canadian Forestry Service

21 December, 1987
Date

Approved by:

J.R. Cuthbert
ADM, Chief Forester
Ministry of Forests and Lands

87.12.22
Date

CANADA-BRITISH COLUMBIA FOREST RESOURCE DEVELOPMENT AGREEMENT, 1985 - 1990

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EXECUTIVE SUMMARY

The second year of the Canada-British Columbia Forest Resource Development Agreement (FRDA) had a total expenditure of $42,591,831 of which the Federal Government contributed $20,817,130 and the Provincial Government contributed $21,774,701. The number of person-days of employment generated was in excess of 185 000 days of work.

A total of 221 173 ha of Crown land was treated or surveyed in 1986/1987, exceeding the goals set for the year. The success of the second year built on the achievements of the first year and can be attributed in part to preliminary work accomplished under FRDA's predecessor, the Canada-British Columbia Intensive Forest Management Subsidiary Agreement.

The emphasis of the second year of FRDA was the acceleration of operational work to reduce the unsatisfactorily restocked lands and to increase intensive forest management.

In addition, emphasis continued to be placed on surveys, developing ecological prescriptions, and on management plans. This was particularly important for the federally managed component, which carried out programs on Indian lands, as well as private and federal lands.

The new modern provincial seed center facility was completed at Surrey in the autumn of 1986; full operations were underway early in 1987.

A concentrated effort was made to improve the knowledge required to reforest backlog areas and to demonstrate the results under the Extension, Demonstration and R&D subprograms.

The budget for the 1987/1988 fiscal year is:

Component	Budget ($ million)
Cost-shared (50% Federal, 50% Provincial)	62.4
Federal component	7.8
Provincial component	6.4
Total Budget	76.6

FRDA OVERVIEW

Duration 1985 - 1990

Signed May 25, 1985

Between

The Government of Canada
represented by the Canadian Forestry Service
Minister of Agriculture
(Minister of State, Forestry and Mines)

And

The Government of the Province of British Columbia
represented by the Minister of Forests and Lands and the
Minister of Industry and Small Business Development

Authority

Canada-British Columbia Economic and Regional Development Agreement, signed November 23, 1984

Federal Canada Forestry Development and Research Act, 1966

Provincial Ministry of Forests Act, 1979

Funding, 1985-1990

Total: $300 million ($150 million federal, $150 million provincial).

Cost-Shared Ratio

$240 million cost-shared
$30 million unilateral federally managed component
$30 million unilateral provincially managed component

Employment

Between 1985 and 1990, FRDA programs are expected to generate 500 full-time jobs and short-term employment for over 15 000 persons.

A. INTRODUCTION TO FRDA

The Canada-British Columbia Forest Resource Development Agreement (FRDA) is a joint initiative of Canada and the Province of British Columbia in recognition of the importance of the forest industry to the economic and social well-being of the Province of British Columbia.

The forestry sector in British Columbia contributes some 86 000 jobs directly and some 172 000 jobs indirectly. It constitutes 10% of the total gross provincial product. Many communities are highly dependent upon the forest industry as their major or only economic base.

However, there are some 737 880 ha of unsatisfactorily restocked lands on good and medium sites which are not contributing to forest growth. In addition, there are many established juvenile stands which need intensive forest management to sustain growth.

Consequently, the Agreement is concentrating on:

a) Managing and reforesting part of the backlog of non-satisfactorily restocked lands;

b) Intensively managing selected forest stands;

c) Supporting of forestry research by government and non-government organizations;

d) Assisting the forest industry through studies of utilization, marketing and product development, technology transfer and training.

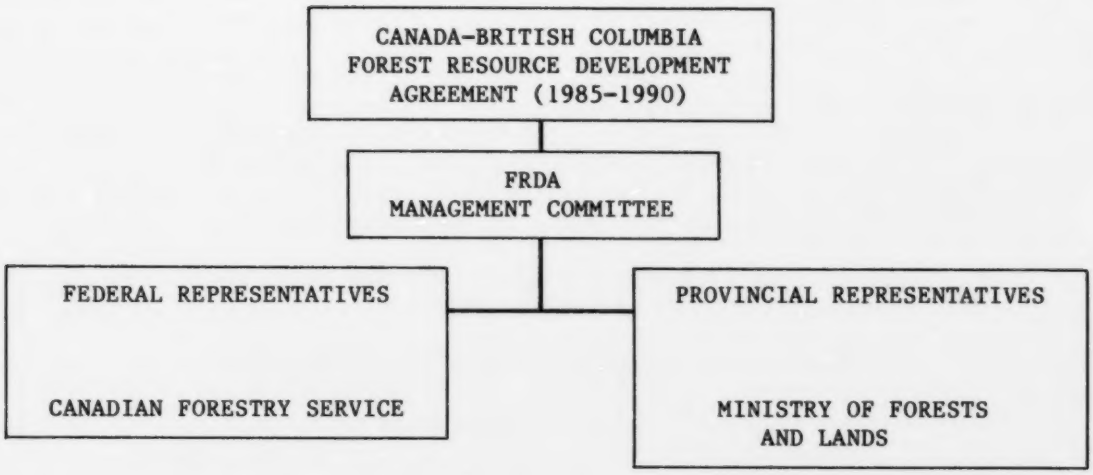
B. FRDA ADMINISTRATION

A joint federal-provincial Management Committee, shown in Figure 1, has been charged by the Provincial and Federal Ministers with the responsibility of implementing the FRDA Agreement.

The Management Committee has appointed working groups, shown in Figure 2, to review and make recommendations of subprograms, activities and projects.

FIGURE 1

THE MANAGEMENT COMMITTEE



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(Cochairperson)
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Forest Development

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(Cochairperson)
Assistant Deputy Minister
Chief Forester

C.M. Johnson
Director
Silviculture Branch

Non-Voting Member

Department of Regional
Industrial Expansion

J. Cooney

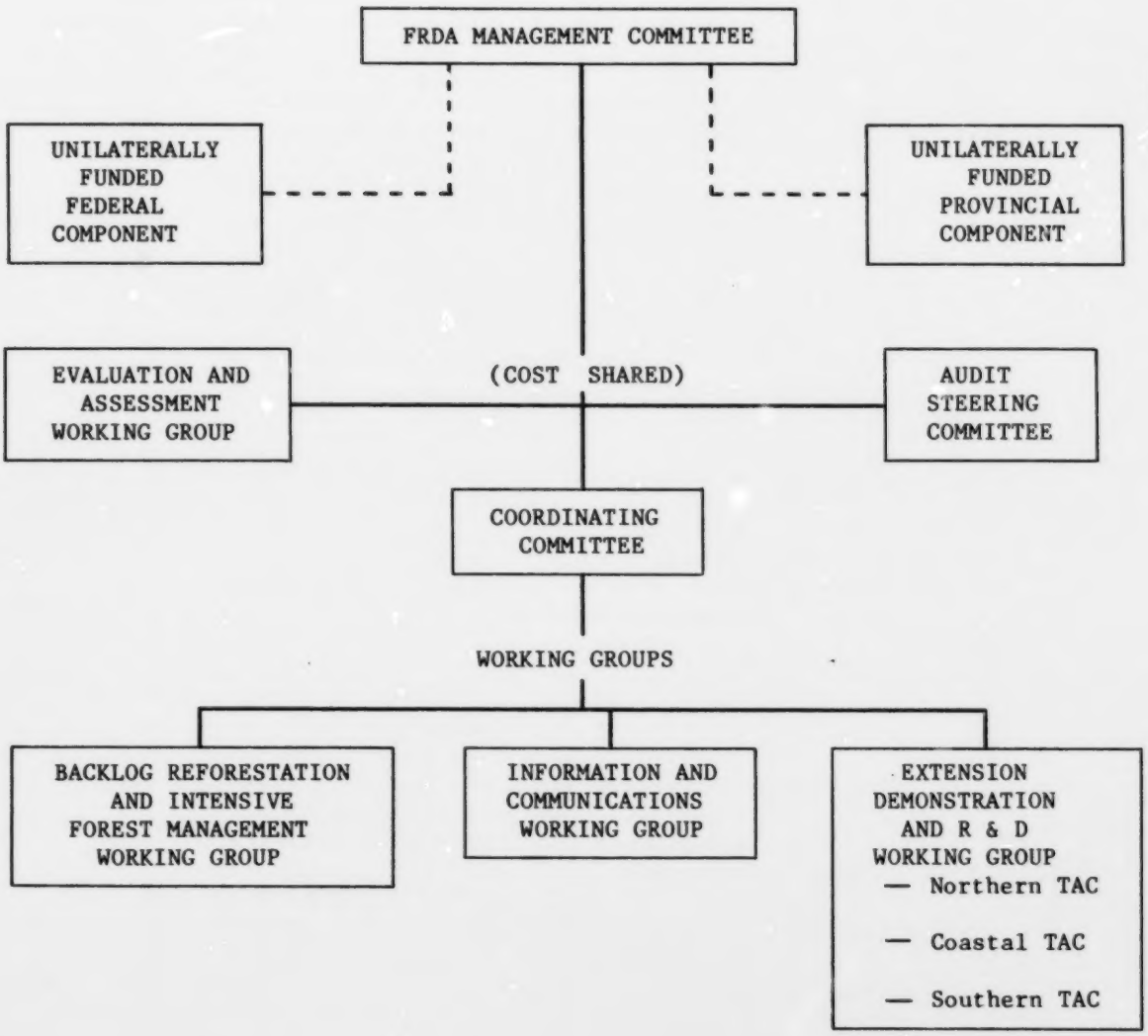
Non-Voting Member

B.C. Ministry of Economic
Development

C. Caple

FIGURE 2

COMMITTEES AND WORKING GROUPS UNDER
THE MANAGEMENT COMMITTEE



NB. TAC: Technical Advisory Committee

1986/1987 FRDA ACTIVITIES

A. 1986-1987 EXPENDITURES

FRDA is being implemented through a cost-shared component and two unilaterally funded components administered by The Canadian Forestry Service and the Ministry of Forests and Lands.

During the second year of the Agreement,approximately $42.58 million was spent as shown in Table 1. Exact expenditures are shown in table 3. The cumulative expenditure to March 31, 1987, was $68.00 million as shown in table 2.

The expenditures in the 1986/1987 year by the province totalled $21.77 million: $17.36 million was spent under the cost-shared component and $4.41 million under the provincially managed component.

Federal FRDA expenditures in 1986-1987 totalled $20.81 million: $17.36 million was under the cost-shared component and $3.45 million under the federally managed component.

Table 1

EXPENDITURES BY COMPONENT
('000,000's dollars)
1986/1987

	COST SHARED COMPONENT	FEDERAL COMPONENT	PROVINCIAL COMPONENT	TOTAL
Federal component	17.36	3.45	-	20.81
Provincial component	17.36	-	4.41	21.77
TOTAL	34.72	3.45	4.41	42.58

Table 2

CUMULATIVE EXPENDITURES BY COMPONENT, 1985/86 - 1986/87
('000,000's dollars)
March 31, 1985 - April 1, 1987

	COST SHARED COMPONENT	FEDERAL COMPONENT	PROVINCIAL COMPONENT	TOTAL
Federal Component	25.90	4.71	-	30.61
Provincial component	25.90	-	11.49	37.39
TOTAL	51.80	4.71	11.49	68.00

TABLE 3

1986/1987 EXPENDITURES BY SUBPROGRAM

Programs and Subprograms	Federal Component	Provincial Component	Cost-Shared		Subprogram Totals
			Federal	Provincial	
Program #1. BACKLOG REFORESTATION					
1.1 Surveys and Prescriptions	747,198	-	1,488,879	1,488,879	3,724,956
1.2 Seeds and Seedlings	8,765	3,003,598	2,358,269	2,358,269	7,728,901
1.3 Site Preparation	10,647	-	4,533,465	4,533,465	9,077,577
1.4 Planting	12,272	-	3,477,651	3,477,651	6,967,574
1.5 Implementation	837529	-	-	-	837,529
1.6 Extension, Demonstration and R & D	865,892	714,528	981,248	981,248	3,542,916
Program Totals	2,482,303	3,718,126	12,839,512	12,839,512	31,879,453
Program #2. INTENSIVE FOREST MANAGEMENT					
2.1 Brushing and Weeding and Pest Control	12,905	187,561	561,857	561,857	1,324,180
2.2 Conifer Release	66,932	-	216,687	216,687	500,306
2.3 Juvenile Spacing	88,269	-	1,614,499	1,614,499	3,317,267
2.4 Fertilization	28,390	-	1,065,603	1,065,603	2,159,596
2.5 Implementation	577,777	-	-	-	577,777
2.6 Extension, Demonstration and R & D	176,293	453,104	-	-	629,397
Program Totals	950,566	640,665	3,458,646	3,458,646	8,508,523
Program #2. IMPLEMENTATION, COMMUNICATIONS AND EVALUATION					
3.1 Implementation Contracts, Monitoring & Evaluation	19,789	51,438	767,280	767,280	1,554,349
3.2 Communications	0		299,034	299,034	649,506
Program Totals	19,789	51,438	1,066,314	1,066,314	2,203,855
TOTALS	3,452,658	4,410,229	17,364,472	17,364,472	42,591,831

B. AMENDMENTS TO 1986/1987 WORK PLAN

No amendments to the FRDA Agreement were recommended to the Ministers by the Management Committee during 1986/1987. The variance between the actual expenditures and the 1986/1987 Work Plan are shown in Table 4.

TABLE 4

VARIANCE FROM 1986/1987 WORK PLAN
($)

Component	Budget	Expenditures	Variance
Cost-shared (50% Federal; 50% Provincial)	35,200,000	34,728,944	-471,056
Federal Component	4,400,000	3,429,227	-970,773
Provincial Component	4,400,000	4,410,229	+10,229
TOTAL	44,000,000	42,568,400	-1,431,600

Notes:
1 It is proposed that the cost-shared variance be re-addressed by increasing corresponding expenditures in fiscal year 1989/1990.
2 The federal budget was reduced during 1986/87. It is anticipated that the difference will be made up during the last 2 years of the Agreement.

C. EMPLOYMENT

Employment generated by FRDA during the second year of the Agreement escalated to more than 153 000 days of work as shown in Table 5. In addition to the employment generated through the cost-shared programs, approximately 13 300 person days of work will be created through the provincially managed component and 10 800 person days through the federally managed component.

It is anticipated that the annual employment generated will more than double in 1987/1988 as the expenditures increase to $76 million.

Over 231,000 person days of work have been created through cost-shared programs in the the first 2 years of FRDA.

D. 1986/1987 ACHIEVEMENTS

1. Cost-Shared Programs

During 1986/1987, 872 backlog reforestation projects were conducted on 199 361 ha, and 236 intensive forest management projects were conducted on 21 812 ha. The area treated by subprograms is shown in Table 5.

Table 6 shows the cost-shared accomplishments, by subprogram, completed during the first 2 years of FRDA.

TABLE 5

FRDA: 1986/1987 Accomplishments by Subprogram
(Cost-Shared)

	1986/1987 Goals (ha)	1986/1987 Area Treated (ha)	1986/1987 Employment Created (person days)
Program 1 Backlog Reforestation			
1.1 Surveys & Prescriptions	214 541	159 715	15 972
1.2 Seeds & Seedlings (# of seedlings)	25mil.	25.027mil.	29 710
1.3 Site Prep. (Site Rehab.)	32 849	19 211	9 606
1.4 Planting	18 859	20 435	40 870
1.5 Implementation	NA	NA	NA
1.6 Research & Development	NA	NA	12 000
			108 158
Program 2 Intensive Forest Management			
2.1 Brushing, Weeding & Pest Control	2 735	4 703	9 406
2.2 Conifer Release	913	312	780
2.3 Juvenile Spacing	6 119	5 516	22 064
2.4 Fertilization	8 085	11 281	1 128
2.5 Implementation	NA	NA	NA
2.6 Extension, Demonstration and Research and Development	NA	NA	
			33 378
Program 3 Implementation, Communications, Evaluation			
3.1 Implementation, Contracts Monitoring and Evaluation			11,730
3.2 Communications			NA
			11 730
GRAND TOTAL			153 266

TABLE 6

CUMULATIVE COST-SHARED ACCOMPLISHMENTS BY SUBPROGRAM
March 31,1985 - April 1,1987

Program 1 Backlog Reforestation	CUMULATIVE EXPENDITURES ($)	CUMULATIVE TREATMENTS (ha)	ESTIMATED CUMULATIVE EMPLOYMENT CREATED (PERSON DAYS)
1.1 Surveys & Prescriptions	3 999 477	254 628	23 342
1.2 Seeds & Seedlings	9 038 717	43 054.MIL	51 110
1.3 Site Prep. (Site Rehab.)	13 358 329	32 572	17 273
1.4 Planting	10 927 796	35 095	63 715
1.5 Implementation	-	NA	NA
1.6 Research & Development	3 082 293	NA	20 000
subtotal	40 406 612		175 440
Program 2 Intensive Forest Management			
2.1 Brushing, Weeding & Pest Control	1465 090	5 616	11 503
2.2 Conifer Release	433 649	312	780
2.3 Juvenile Spacing	5 054 494	8 876	36 948
2.4 Fertilization	2 132 852	11 287	1 128
2.5 Implementation	-	NA.	NA
2.6 Extension, Demonstration and Research and Development	-	NA.	NA
subtotal	9 086 085		50
359			
Program 3 Implementation, Communications, Evaluation			
3.1 Implementation, Contracts Monitoring and Evaluation	1 713 384		13 248
3.2 Communication	598 068		NA
subtotal	2 311 452		13 248
GRAND TOTAL	51 804 149		239 047

Program 1: Backlog Reforestation

The largest of the three programs is the Backlog Reforestation program. In 1986/1987, 20 435 hectares of good and medium non-satisfactorily restocked sites were planted. Of the target to rehabilitate 150 000 ha over the life of the Agreement, 23% or 35 095 ha, have been planted to the end of the 1986/1987 year.

A total of 25.027 million seedlings were cost shared in 1986/1987 at a cost of $4.7 million. The average cost per seedling was 18.8 cents; 73% were container-grown stock.

In the second year of FRDA work continued on conducting surveys and developing prescriptions or management plans. To date 254 628 ha have been surveyed and a reconnaissance has been done on many more hectares to determine their stocking levels and suitability for treatment. Updated surveys are required to determine the current status of potential treatment sites and to develop prescriptions based upon sound ecological principles.

Extension, Demonstration and R & D (Subprogram 1.6) is aimed at solving technical problems faced by the field foresters responsible for implementing FRDA backlog reforestation operations. Under the cost-shared component, 53 projects were initiated during 1986/1987, for a cost of $1,962,496. Investigations under the Extension, Demonstration and R & D subprogram covered all phases of backlog reforestation with the emphasis on site preparation, seedling stock and vegetation management. To date, 139 cost-shared projects have been approved: 35 in the Northern Interior, 47 in the Coastal area and 57 in the Southern Interior.

The extension, demonstration and R&D technology transfer periodical, Solutions, was initiated and was well received by the forestry community.

Program 2: Intensive Forest Management

Under the Intensive Forest Management program 21 812 ha were treated in the 1986/1987 year.

Of the target to treat approximately 180 000 ha over the life of the Agreement, 14%, or 26 090 ha, has been accomplished thus far. The maintenance and enhancement of plantations through intensive forest management ensures that seedlings reach a free growing stage. This protects the original investment and is essential to a good forest management strategy.

The fertilization subprogram was initiated in 1986/87. Cost reductions during the year were realized through improved technology.

Program 3: Implementation, Communication and Evaluation

This subprogram is aimed at publicizing the objectives, progress and future direction of FRDA initiatives.

The activities of FRDA were promoted through project signs showing joint funding, advertisements in local, regional and provincial papers and media attention.

In addition the Communication subprogram is designed to create greater public awareness, understanding and support of forestry in British Columbia and of the Canada-British Columbia Forest Resource Development Agreement.

A public awareness poll was carried out to determine and measure the attitudes of the B.C. public on a number of forestry issues. This information provided baseline data upon which future communications plans could be developed.

The Communications Working Group began publishing a quarterly newsletter entitled Renewal to report on progress and activities of FRDA to a mailing list of about 3500. News releases were issued updating the media on the achievements of FRDA.

An interpretive brochure focussing on the Agreement and intended for general information use was distributed to the general public. Support was given to the British Columbia Forestry Association to fund National Forest Week activities.

Contributions to a national forestry awareness campaign, Green Gold, were made and supported the production and airing of four 60- second national television advertisements and several magazine adds.

2. Unilaterally Funded Programs

a. Federally Managed Component

During the initial year of the Agreement, The Canadian Forestry Service initiated programs on privately owned lands, Indian forest lands and federal lands. The federally managed component continued to concentrate on developing management and inventory plans as an initial step in stand establishment and enhancement. The second year saw the initiation of forestry work based upon the prescriptions developed in the first year.

In addition, projects were initiated to increase the knowledge pertaining to the renewal of backlog non-satisfactorily restocked land and intensive forest management.

Prince George Office

A CFS branch office in Prince George was opened in October of 1986. The office provides a point of contact for developing projects, providing assistance, and disseminating information.

Private Lands Program

The Canadian Forestry Service is developing tools and techniques for forestry on private woodlots, and is providing extension services to those small owners who are often unaware of appropriate forest management strategies. The federal component contributed $360,100 in 1986-1987, approximately 80% of actual project costs. In 1986/1987, 41 silvicultural treatments were initiated on 17 300 ha.

Indian Forest Lands Program

In British Columbia there are 196 Indian Bands which have 338 378 ha of land on 1606 reserves. Integrated forest land management will contribute to both short-term and long-term employment for Indian Bands.

The Canadian Forestry Service is assisting the development of tools and strategies for forestry on Indian Lands, and is providing extension services.

During the first 2 years of the Indian Forest Lands Program, emphasis was placed on conducting forest inventories and developing forest management plans for Indian reserve land throughout British Columbia.

During 1986/1987, 62 Indian Bands conducted forest inventories on over 108 900 ha involving total expenditures of $1,088,600. These inventories represent 31% of all reserve land in British Columbia . Forty nine of the bands that conducted forest inventories have also developed forest management and operating plans. Of the 13 bands that remain, most intend to develop their plans at a later date.

In addition, two projects involving site preparation, planting, conifer release and juvenile spacing were completed at a cost of $61,500.

FRDA will provide $5.5 million over the next 3 years for silvicultural work.

Extension, Demonstration and R & D

The intent of the Federal Component is to develop applied research which will improve the knowledge and efficiency of operational foresters managing public, private and Indian lands. The budget for this program is $5 million: $4 million under the Backlog Reforestation Program and $1 million under the Intensive Forest Management Program. During the 1986/1987 fiscal year, $801,425 was spent on backlog reforestation - primarily reforestation and site preparation projects. An additional $176,272 was spent on intensive forest management.

To date, 47 projects have been approved ranging in duration from 1 to 5 years. Twenty of those will be carried out by British Columbia universities and 16 will be carried out by forest companies in consultation with The Canadian Forestry Service.

Provincial Component

The Ministry of Forests is focusing on monitoring growth and yield performance, seed supply and processing needs, applied research support, and pest control.

Seed and Nursery Technology

After beginning construction in September 1985, the new modern Provincial Seed Centre was completed at Surrey in the autumn of 1986. Full operations at this facility were underway early in 1987 with seed withdrawal and preparation for the Spring 1987 sowings and cone and seed processing of the 1986/1987 cone harvest.

Construction to improve and expand container stock production was continued at Thornhill (near Terrace), Red Rock (near Prince George), Vernon, Harrop (near Nelson), Skimikin (near Salmon Arm), Chilliwack, Surrey, Green Timbers (in Surrey), Koksilah (near Duncan) and Campbell River nurseries. Improvements were made to two greenhouses at Skimikin and Koksilah for use as pilot-scale containerized spruce seed orchards to expedite the production of genetically improved seed for reforestation.

Pest Control

This program focuses on important pests in young forests. Much of the work that will be completed over the 5 years utilizes trials and demonstrations for major pests which injure young trees.

More than 20 extensive and intensive surveys for forest pests have been completed. De-stumping trials and surveys of residual roots have been conducted in several areas throughout the province. Strategies have been developed for surveying root diseases in the southern interior, and porcupine control on the north coast. A computer program is under development to record pest control projects and keep track of infestations.

Extension Demonstration and R&D

A Provincial component expenditure of $714,528 under subprogram 1.6 was spent on completing the contruction of new research greenhouses and laboratory facilities at Red Rock (Prince George Region) and on improving the ability to predict the future growth and yield of plantations.

The Provincial component of subprogram 2.6 supports research on the growth and yield effects of intensive forestry treatments. Expenditures of $453,104 were directed at measuring and analyzing the effects of thinning and fertilizing Douglas-fir and western hemlock on the coast; and the espacement and fertilization of lodgepole pine and white spruce in the interior.

FRDA 1987/1988 WORK PLAN

The following Work Plan and Budget for 1987/1988 has been approved by the Management Committee in accordance with the Canada-British Columbia Forest Resource Development Agreement (1985-1990), Section 3.6 (a). The work plan is subject to adjustments due to operational considerations.

PROGRAM	EXPENDITURE		
FRDA: Federal Component	Federal Component ($)	Provincial Component ($)	Total ($)
1. Backlog Reforestation	4,588,200	-	4,588,200
2. Intensive Forest Management	2,761,700	-	2,761,700
3. Implementation, Communication and Evaluation	450,100	-	450,100
SUB-TOTAL	7,800,000	-	7,800,000
FRDA: Provincial Component			
1. Backlog Reforestation	-	4,759,400	4,759,400
2. Intensive Forest Management	-	1,565,600	1,565,600
3. Implementation, Communication and Evaluation	-	105,000	105,000
SUB-TOTAL		6,430,000	6,430,000
Cost Shared Component			
1. Backlog Reforestation	18,805,248	18,805,248	37,610,496
2. Intensive Forest Management	10,370,600	10,370,000	20,741,199
3. Implementation, Communication and Evaluation	2,024,152	2,024,152	4,048,305
SUB-TOTAL	31,200,000	31,200,000	62,400,000
TOTAL	39,000,000	37,630,000	76,630,000